

301 Commerce Street, Suite 500 Fort Worth, TX 76102

Long B. Nguyen Director, Process Safety & Environmental Programs

April 25, 2022

Director, Air Enforcement Division U.S. Environmental Protection Agency MC 2242A 1200 Pennsylvania Ave. NW Washington, D.C. 20460

Director Compliance Assurance and Enforcement Division U.S. Environmental Protection Agency, Region 6 1201 Elm Street Dallas, TX 75270

Director of Litigation Litigation Division MC-175 Texas Commission on Environmental Quality P.O. Box 13087 Austin, TX 78711-3087

Division Chief **Environmental Protection Division** MC-066 Office of the Attorney General of Texas P.O. Box 12548 Austin, TX 78711-2548

Chief, Environmental Enforcement Section Environment and Natural Resources Division U.S. Department of Justice Box 7611 Ben Franklin Station Washington, D.C. 20044-7611

**Re: Malfunction Event Notice** Tokai Carbon CB Borger Plant

Dear Sir/Madame:

Per Provision 54 of the Consent Decree, Tokai Carbon CB hereby provides notice that the Borger Plant Wet Gas Acid ("WSA") scrubber had elevated SO2 and NOx emissions relative to their most stringent 7-day limits, for the period of March 10<sup>th</sup> through April 24<sup>th</sup>, 2022. (Please see attached CEMS data).

We are continuing to trouble-shoot the process with the vendors to determine why the WSA scrubber is not performing at an optimum level. At this point, we are focusing on the inline duct burner as a possible main cause for the elevated SO<sub>2</sub> and NOx emissions.

The purpose of the inline duct burner is to heat the flue gas from 515 °F to 750 °F. The elevated temperature is needed as the flue gas enters the WSA scrubber. A trial has been planned for May 2022 to use a temporary, external heating source, instead of the inline duct burner, to increase the flue gas temperature. If this trial is successful, then we will proceed with a permanent engineering solution that will implemented as quickly as possible.

Specifically for the elevated NOx emissions, we also have contacted the SCR vendor, Cormetech, to evaluate the operation parameters of the ammonia injection system and the SCR reactor. Based on an assessment of the process data that we have provided to the vendor, the vendor believes that catalyst fouling may have occurred. A shutdown of the WSA scrubber is planned so that an inspection can be performed and if required, we will perform the necessary cleaning of the catalyst surface. Additionally, we are evaluating the ammonia injection equipment to ensure adequate flow of the ammonia into the SCR.

For the elevated SO<sub>2</sub> emissions, we are also working with the WSA vendor, Haldor-Topsoe, to identify the root-cause for the WSA catalyst's performance. The vendor suspects that poor combustion from the upstream tail gas fired boilers and the natural gas fired duct-burner may negatively impact the WSA performance. A shutdown is planned to inspect the equipment, repairs be made if needed, so that the combustion of the equipment can be optimized.

As we have requested in the past, we would like to implement the alternative limits that are outlined in Provision 18 (Option B and Appendix E) and Provision 27.b.ii. These provisions allow for the collection of emissions data for a certain period, and alternative limits can be set based on the data collected.

Please let me know if you need additional information.

Sincerely,

As Burn

Long B. Nguyen

## SO2 7-Day ppmvdc Excess Emission Report

Boiler (EPN-119)

From: 03/01/2022 00:00 Generated: 04/25/2022 06:53 **To:** 04/25/2022 05:58 Location:

Facility Name: Tokai Borger Facility Borger, TX



Tag Name: U1\_SO2\_7D\_Ppmvdc\_1D

Total operating Time: 53.00 Day(s)

Non-Operating Time: 3.00 Day(s) Report Time: 56.00 Day(s)

No Exclusions Allowed

Total Operating Time:

Total Duration (Online only):

Time in exceedance as a percentage of operating time:

Time in compliance as a percentage of operating time:

53.00 Day(s)

45.00 Day(s)

84.91%

15.09 %

## NOx 7-Day ppmvdc Excess Emission Report

Boiler (EPN-119)

From: 03/01/2022 00:00 To: 04/25/2022 05:58 Fa Generated: 04/25/2022 06:52

58 Facility Name: Location:

Tokai Borger Facility

Borger, TX



Tag Name: U1\_NOX\_7D\_Ppmvdc\_1D

Total Operating Time: 53.00 Day(s)

Non-Operating Time: 3.00 Day(s) Report Time: 56.00 Day(s)

No Exclusions Allowed

		87	54	81	14	04/24/22 23:59	04/11/22 00:00 04/24/22 23:59	2
		57	54	56	3	03/10/22 00:00 03/12/22 23:59	03/10/22 00:00	Н
Action Code	Reason Code	Maximum	Limit	Average	Day(s)	End Time	Start Time	
					Duration in		,	Inc

Total Operating Time:

Total Duration (Online only):

Time in exceedance as a percentage of operating time:

Time in compliance as a percentage of operating time:

53.00 Day(s) 17.00 Day(s) 32.08 % 67.92 %